

MAIZE IN THE YANHUITLAN CODEX

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The appearance of a definitive edition¹ of the Yanhuitlán Codex, under the editorship of Wigberto Jimenez Moreno and Salvador Mateos Higuera, gives us a unique opportunity to learn something about the maize of southern Mexico immediately after the Spanish Conquest. This interesting Codex, which fascinates scholars by its naive blending of native and European techniques, provides us with a good deal of incidental information about the yields and uses of maize at that time and place. In addition, some of the delineations of the maize plant are so realistic as to be useful scientific evidence.

Like many important codices, the Yanhuitlán Codex has had a checkered career, and its entire history is not known. The editors discuss the evidence in detail. The original of the document has been for a long time in the Academia de Bellas Artes in Puebla, Mexico. The exact date when it was placed there is not known, but in 1892 it was mentioned in a catalogue of the Mexican Exhibit of the American Historical Exposition in Madrid. Its history previous to this period and the reasons why it was brought to Puebla remain unknown. The Codex was written on paper of Spanish manufacture in the sixteenth century, and it bears a watermark used in Spain from about 1550 to 1570.

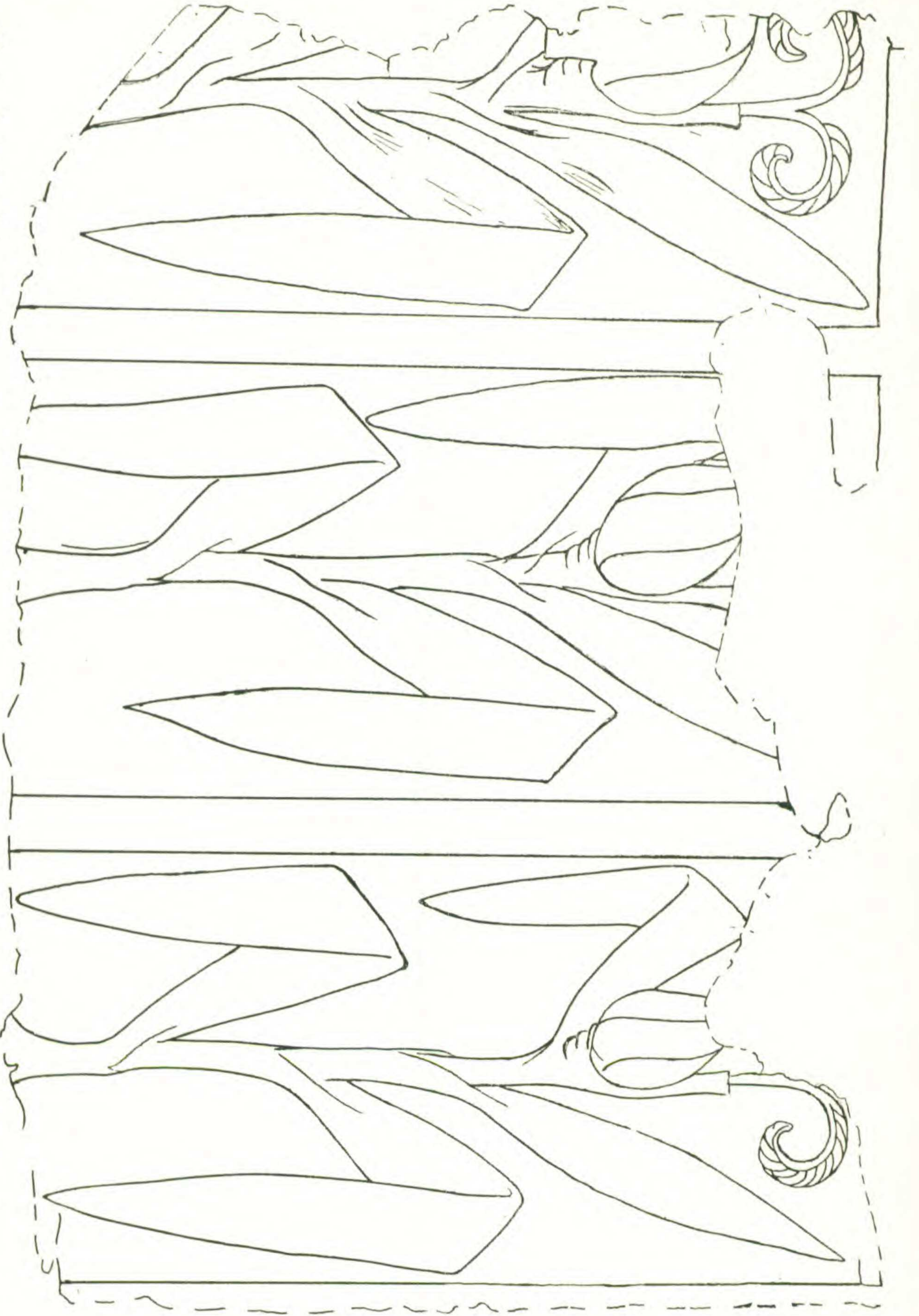
The town of Yanhuitlán, whose history the Codex records, is located in the Mixteca Alta half-way between Nochistlán and Tepozcolula in the present state of Oaxaca. As the name Alta indicates, this is a high, cold region.

The Codex is almost unquestionably of native workmanship. The drawings show both Spanish and Indian influence, and no Spanish-trained scholar of the time would have undertaken to write a history in such a form. The sketches are dated according to native pre-Conquest technique by characters and symbols identical with those used in pre-Conquest documents. Discussing the history of a Mixtec town, the work is annotated in Mixtec rather than in Spanish.

From an artistic point of view (as well as an historical), the drawings in the Codex are significant because they appear to have been sketched a very short time after the actual events occurred, perhaps in the very sight of the subjects depicted. On the other hand, the drawings show European influence as well. Pre-Conquest drawings have no perspective and solid figures are without shading to indicate contour. The perspective of buildings and moving figures in the drawings is imperfect, but it is frequently attempted and people are sketched in with realistic shading. The drawing was done with pen. Shading appears to have been added

¹ *Códice de Yanhuitlán*. 89 pp. 24 pls. Mus. Nac. Inst. Nac. de Antropol. e Hist. Mexico, 1940.

Fig. 1. A tracing of Lámina XVII. Broken lines represent torn edges of the original sheet. The drawing shows three plants of maize each with one ear at the left and the tassel above.



with *pincel* (artist's brush), and this process—used by the aborigines—leads one to believe that the author of the record was already a *tlacuilo* (Aztec scribe) at the time when Spanish culture arrived.

The realism of the drawings demonstrates fairly accurately what kind of maize was under observation by the artist. Mexico now has strikingly different types of maize in different parts of the country. Eventually from archaeological and historical evidence it should be possible to work out in considerable detail the history and origin of the different types as is already being done in other areas.²

The maize plants in this figure (pl. 16 and text-fig. 1) are distinguished by their broad, more or less bent leaves, by the short ears whose husks spring out sharply from the stem at almost a right angle, and by coarse tassels with few branches. All these features are characteristic of one of the commonest types of Mexican maize, the many-rowed, short-eared, dent-kernelled varieties which are centered on the region around Mexico City and which Anderson and Cutler³ have provisionally named "Mexican Pyramidal." The semi-stylized drawings of the



Fig. 2. Pre-Conquest drawing of a maize plant (from the Codex Fejérváry Mayer). Note stylized representation of the three tassel branches. Compare with fig. 1.

tassel have undoubtedly been influenced by the customary pre-Conquest glyph for the maize plant (a tracing is shown in fig. 2) and therefore may not be too diagnostic. The realistic treatment of the rest of the plant is, however, completely unlike anything in pre-Conquest documents, and is such an exact representation of present-day "Mexican Pyramidal" plants that it presents almost indisputable evidence that the artist had such a plant before him when the drawing was made.

The demonstration that in the late 16th century a Mexican Pyramidal type of maize was being grown in Oaxaca, where such types are to-day exceedingly common, would not be very significant if it were not for an important archaeological fact. The Zapotec funerary urns from near-by regions sometimes include representations of the maize ear in the head-dress of the main figure. These are frequently so stylized as to be useless in determining what type of maize was being grown at the time they were made. A whole group of them, however, are realistic, and many probably represent actual casts made from the ears themselves. Without exception these record a type of maize which is to-day either unknown or at least exceedingly rare in Oaxaca—one which looks different from Mexican Pyramidal varieties

² Carter, George F., and Anderson, Edgar. A preliminary survey of maize in the southwestern United States. *Ann. Mo. Bot. Gard.* 32:297-322. 1945.

³ Anderson, Edgar, and Hugh C. Cutler. Races of *Zea Mays*: I. Their recognition and classification. *Ann. Mo. Bot. Gard.* 29:69-88. 1942.

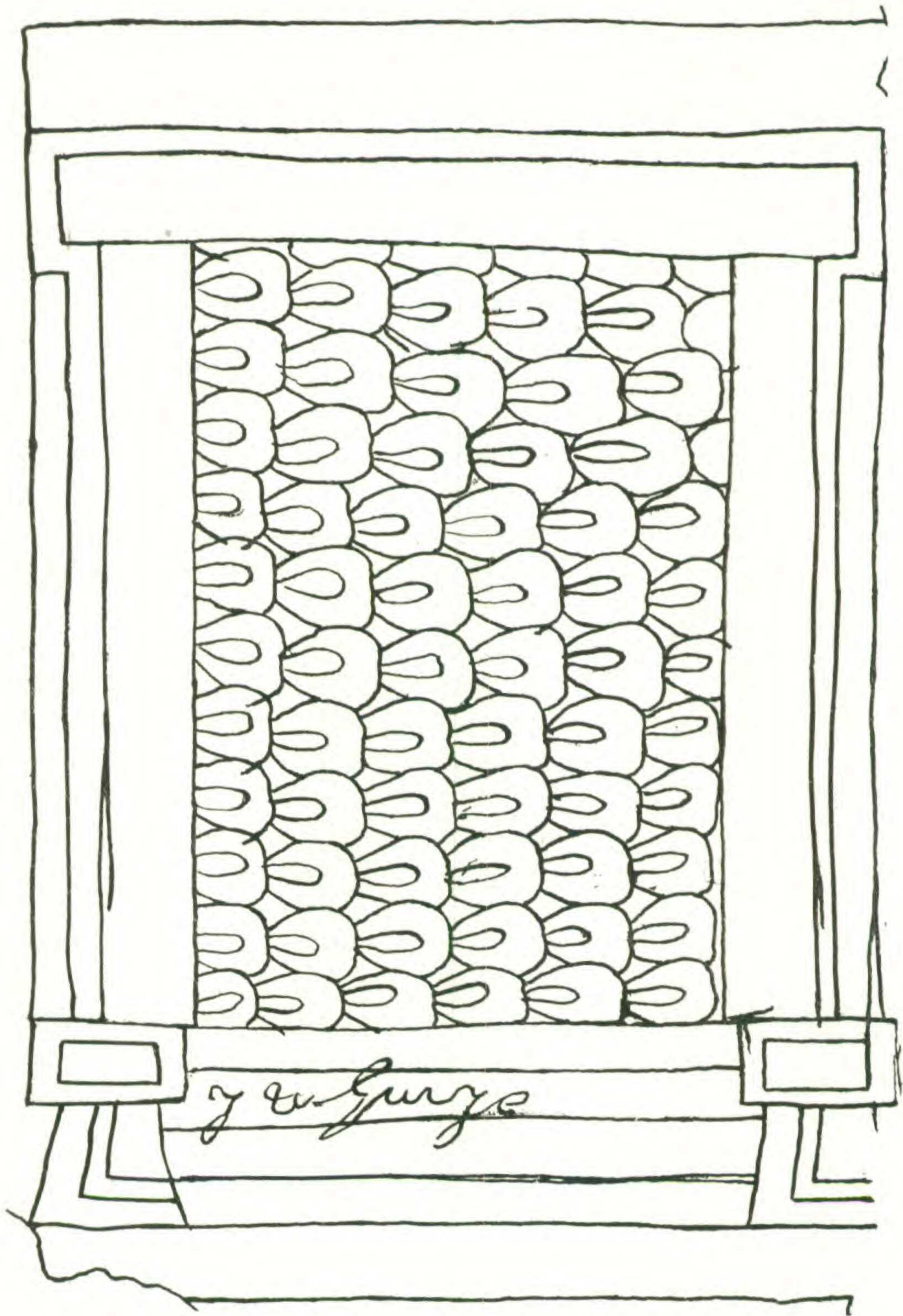


Fig. 3. Tracing of a portion of Lámina XI (see pl. 17) representing a granary filled with maize. The kernels are shown lying on their sides and are obviously derived from the pre-Conquest glyph for maize.

and suspiciously similar to the Basketmaker maize which was being grown in the southeastern United States at about the same period. By analogy with the types of present-day maize which resemble it, we would predict that the maize of the Zapotec funerary urns had narrow tough leaves which did not break readily, that it has long wiry tassel branches with at least 10 to 15 branches in each tassel, and that its husks were wrapped tightly around the ear at the base. Whether or not it was actually of this type, it could not by any stretch of the imagination have been borne on such a plant as the one so realistically depicted in the Yanhuitlán Codex. Such ears could never have been borne in these husks.

The following is a literal translation of the editors' description of the drawings of the maize plant:

Three large rectangular drawings cover this page, but lower and side strokes cannot be seen because the two margins of the paper are lacking. Each of the sketches is a replica drawing of the one and same maize plant. If the plants were drawn with roots, as was the native custom, they cannot be seen because of the frayed margin. The bases of the stalks are broader than other parts, and the plants' corresponding leaves are perfectly drawn, some with their natural creases. An ear of corn covered by its husk is attached to the stalk near the top. The tips of the plant cannot be distinguished because the paper is torn there and the drawings are covered with adhesive tape to hold the page. But in the side sketches parts of the tassels terminating the plant can be seen. It is one of the peculiarities of these drawings that each stalk represents a cornfield during its stage of maturity. It was their custom to express in paintings one single thing to represent the whole.⁴

In addition to defining at least one of the types of maize under cultivation in Oaxaca in the late 16th century, the Yanhuitlán Codex gives us a good deal of incidental information about the culture and uses of maize at that period. The crudely drawn imperial granaries of the pre-Conquest *Matricula*⁵ are replaced by more detailed and realistic delineations. The editors describe these drawings as follows:

[The drawings on Lámina XI] represent four granaries drawn like four buildings on platforms, each of which has a high-stoop opposite with four or five treads. Between the lines there is written repeatedly a Mixtec inscription: "y^tu buiyo" meaning "corn field." [According to the vocabulary of Alvarado, *buiyo* means "corn germinated without sowing it."] On the two sides which define the width of the treads, wooden beams are drawn at the bottom in trapezoidal form, perhaps in order to indicate descent—with parallel lines sketched in as decorations at the edges. These appear to indicate decoratively the formation of ascending and descending steps. And toward the top resting on this section are rectangular roofs somewhat narrower than the parts at the base. In the same direction as these beams, plain window posts arise without other decoration than parallel lines which seem to simulate more elaborately embossed borders. These extend around the lintels resting directly on top of the window posts. As the document lacks colors and these sections do not have description to indicate the material used in its manufacture, it is impossible to determine if the granary is made of wood. But this is probable since it is known that beams were most commonly used in these structures. The roof must have been flat since the top is not drawn otherwise. The interiors of these granaries are full of shelled corn drawn as kernels of large size perfectly recognizable. It should be noted on this page that these four granaries full of corn are the product of four sowings which the Indians of Yanhuitlán are obliged to cultivate in order to satisfy what was prescribed in the required valuation of the governor, Don Domingo, "by reason of its value during the time which he held it." The valuation was made by the Viceroy, Don Antonio de Mendoza, October 26, 1548, and, after estimating

⁴ *Op. cit.* Lámina XVII, pp. 64-65.

⁵ Anderson, Edgar, and R. H. Barlow. The maize tribute of Moctezuma's empire. *Ann. Mo. Bot. Gard.* 30:413-420. 1943.

other loans, it mentions: "They are to reap four more sowings of corn; two of these have 400 *brazas en quadro* each; the third, 300; and the fourth, 600."⁶

The widespread use of maize as a tax or tribute is referred to in the editors' study of the Codex:

. . . In order for all the priests of S. Domingo to enjoy the fruition of this cornfield [in Yanhuitlán] . . . they will be given the harvests of wheat and corn for the sustenance of all the priests . . .⁷

. . . [The Indians] will make four more plantings of corn, two of which will reap 400 *brazas en quadro*, a third, 300, and the fourth, 600.⁸

. . . Each of them pays in taxes 782 pesos and half in gold dust, and they plant 15 *banegas* of wheat; . . . 700 tortillas of maize and 30 *buesos* and a half *banega* of maize . . . This is a fertile land for corn and wheat . . .⁹

It is interesting to note from the Codex that maize was carried in packs in exactly the manner which prevails today in parts of Mexico. The authors comment on Lámina XII as follows:

. . . In the center of the upper half, one sees the picture of a *tameme*, a native carrier whose body is covered by nothing other than a *maxtlatl*, without any decoration. This, together with the duty he is performing, indicates his low condition. One of the ends of the cloth covering him falls to the front, and the other is knotted at the back of the belt then hangs down. The carrier's burden consists of a thinly woven sack full of shelled corn which he carries by using a *mecaçal* [tump line, *i. e.* a long rope used by porters with a flat band fitting over the forehead]. This object, still used today, consists of a fiber woven from maguey in the form of a band, and variable in width as much as ten centimeters; on its ends it has some handles made of textile material. Cords are attached to these tying the weight.¹⁰

⁶ *Op. cit.*, Lámina XI, pp. 61-62.

⁷ *Op. cit.* p. 33.

⁸ *Op. cit.* p. 36.

⁹ *Op. cit.* p. 33.

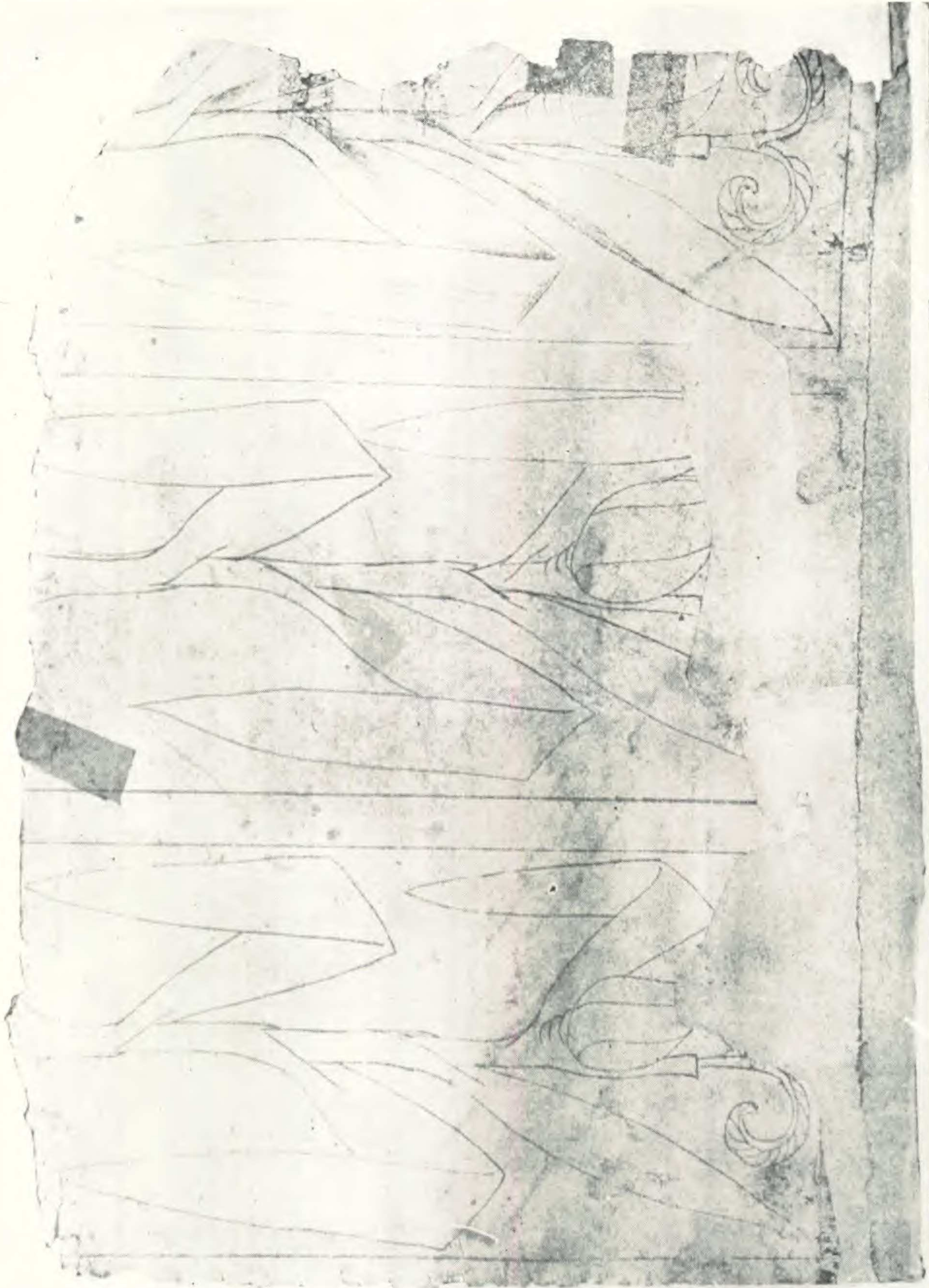
¹⁰ *Op. cit.* p. 61.

EXPLANATION OF PLATE

PLATE 16

Lámina XVII of the Yanhuitlán Codex, showing three plants of maize, each one of which probably symbolizes an entire field (see text). A tracing of this *lámina* is shown in text-fig. 1.

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EXPLANATION OF PLATE

PLATE 17

Lámina XI of the Yanhuitlán Codex. Four granaries (*trojes*) filled with maize. A tracing of the upper right-corner is shown in text-fig. 3.